

## REMARKS/ARGUMENTS

### 1.) Claim Rejections – 35 U.S.C. §102(e)

The Examiner has rejected claims 30-58 as being anticipated by Yamaguchi, *et al.* (U.S. Patent No. 5,604,807). The Applicant traverses the rejections.

It must be remembered that anticipation requires that the disclosure of a single piece of prior art reveals every element, or limitation, of a claimed invention. Furthermore, the limitations that must be met by an anticipatory reference are those set forth in each statement of function in a claims limitation, and such a limitation cannot be met by an element in a reference that performs a different function, even though it may be part of a device embodying the same general overall concept. Whereas Yamaguchi fails to teach each and every limitation of claims 30-58, those claims are not anticipated thereby.

Claim 30 recites:

30. A method of establishing a session key shared between a first network element of a first network domain and a second network element of a second network domain, said first network domain comprising first cryptographic means and means for sharing a secret key with said second network domain comprising second cryptographic means, said method comprising the steps of:

said first cryptographic means generating a freshness token;

said first cryptographic means generating said session key based on said shared secret key and said generated freshness token;

providing said session key (K) to said first network element;  
providing said freshness token to said second cryptographic means;

said second cryptographic means generating a copy of said session key based on said shared secret key and said provided freshness token; and,

providing said copy of said session key to said second network element. (emphasis added)

As presented in claim 30, the Applicant's invention is characterized by the use of a "freshness token" in methods, and systems, for providing secure communication between first and second network elements. A first cryptographic means associated with a first network domain generates a freshness token, and then generates a session

key based on a shared secret key and the generated freshness token. The session key (which is a function of the freshness token) is then provided to a first network element of the first network domain, and the freshness token is provided to a second cryptographic means associated with a second network domain. The second cryptographic means generates a copy of the session key based on the shared secret key and the received freshness token; the copy of the generated session key is then provided to a second network element. The first and second network elements can then communicate securely based on the use of the session key.

In rejecting claim 30 as being anticipated, the Examiner recites the elements thereof and asserts that they are all taught by Yamaguchi, referring to "Fig. 11-13, and col. 10 line 35 to col. 13 line 35." The undersigned has reviewed the referenced portions of Yamaguchi, however, and can find no teaching of a "freshness token," much less any similar token used in the functions recited in claim 30. Although Yamaguchi does describe use of a session key, it does not appear that it teaches a session key that is a function of a freshness token. Therefore, Yamaguchi fails to anticipate claim 30.

Furthermore, in a specific embodiment recited in claim 33, which is dependent from claim 30, the freshness token comprises a random challenge, and the method of claim 30 further comprises the steps of:

- said first cryptographic means generating an expected response based on said shared secret key and said random challenge;

- providing said expected response to said first network element;

- said second cryptographic means generating a response based on said shared secret key and said provided random challenge;

- providing said response to said first network element; and,
- said first network element authenticating said second network element based on a comparison between said expected response and said response. (emphasis added)

In rejecting claim 33, the Examiner recites the elements thereof and asserts that they are all taught by Yamaguchi, referring to "col. 10 line 35 to col. 11 line 50." The undersigned has reviewed the referenced portion of Yamaguchi, however, and can find no teaching of a freshness token that comprises a random challenge and which is

employed in the functions recited in claim 33. Therefore, Yamaguchi also fails to anticipate claim 33.


Whereas independent claims 31, 42, 43, 51 and 55 include limitations analogous to those of independent claim 30 relating to a freshness token, those claims are also not anticipated by Yamaguchi. Similarly, whereas dependent claims 45, 53 and 57 limit the freshness token to a random challenge, further comprising limitations analogous to those of dependent claim 33, they are not anticipated by Yamaguchi. Finally, whereas claims 32 and 34-41 are dependent from claim 30; claims 44 and 46-50 are dependent from claim 42; claims 52 and 54 are dependent from claim 51; and claims 56 and 58 are dependent from claim 55, and include the limitations of there respective base claims, they are also not anticipated by Yamaguchi.

#### CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 30-58.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

  
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